

06-21-01

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**UTILITY PATENT APPLICATION TRANSMITTAL**  
**(Large Entity)***(Only for new nonprovisional applications under 37 CFR 1.53(b))*Docket No.  
END920010026US1Total Pages in this Submission  
4**TO THE ASSISTANT COMMISSIONER FOR PATENTS**Box Patent Application  
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

**EXTENSION OF FATIGUE LIFE FOR C4 SOLDER BALL TO CHIP CONNECTION**

and invented by:

**William E. Bernier et al.**ASSIGNEE NAME: International Business Machines Corporation  
ASSIGNEE RESIDENCE: Armonk, NY**If a CONTINUATION APPLICATION, check appropriate box and supply the requisite information:**☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Which is a:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Enclosed are:

**Application Elements**

1. ☒ Filing fee as calculated and transmitted as described below
2. ☒ Specification having 36 pages and including the following:
  - a. ☒ Descriptive Title of the Invention
  - b. ☐ Cross References to Related Applications *(if applicable)*
  - c. ☐ Statement Regarding Federally-sponsored Research/Development *(if applicable)*
  - d. ☐ Reference to Microfiche Appendix *(if applicable)*
  - e. ☒ Background of the Invention
  - f. ☒ Brief Summary of the Invention
  - g. ☒ Brief Description of the Drawings *(if drawings filed)*
  - h. ☒ Detailed Description
  - i. ☒ Claim(s) as Classified Below
  - j. ☒ Abstract of the Disclosure

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## Application Elements (Continued)

3. ☒ Drawing(s) (when necessary as prescribed by 35 USC 113)

- a. ☒ Formal                      Number of Sheets 4
- b. ☐ Informal                      Number of Sheets \_\_\_\_\_

4. ☒ Oath or Declaration

- a. ☒ Newly executed (original or copy)      ☐ Unexecuted
- b. ☐ Copy from a prior application (37 CFR 1.63(d)) (for continuation/divisional application only)
- c. ☒ With Power of Attorney      ☐ Without Power of Attorney
- d. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application,  
see 37 C.F.R. 1.63(d)(2) and 1.33(b).

5. ☐ Incorporation By Reference (usable if Box 4b is checked)

The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6. ☐ Computer Program in Microfiche (Appendix)

7. ☐ Nucleotide and/or Amino Acid Sequence Submission (if applicable, all must be included)

- a. ☐ Paper Copy
- b. ☐ Computer Readable Copy (identical to computer copy)
- c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

## Accompanying Application Parts

8. ☒ Assignment Papers (cover sheet & document(s))

9. ☐ 37 CFR 3.73(B) Statement (when there is an assignee)

10. ☐ English Translation Document (if applicable)

11. ☒ Information Disclosure Statement/PTO-1449      ☒ Copies of IDS Citations

12. ☐ Preliminary Amendment

13. ☒ Acknowledgment postcard

14. ☒ Certificate of Mailing

☐ First Class      ☒ Express Mail (Specify Label No.): ET029404443US

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## Accompanying Application Parts (Continued)

15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)

16. ☐ Additional Enclosures (please identify below):

## Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

17. ☐ Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.

### Warning

**An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.**

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ASSIGNEE NAME: International Business Machines Corporation  
ASSIGNEE RESIDENCE: Armonk, New York

## Fee Calculation and Transmittal

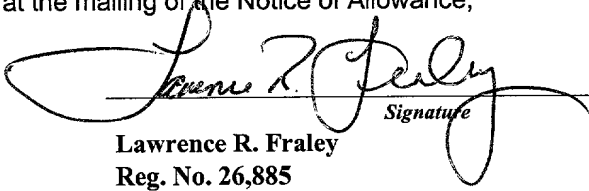
### CLAIMS AS FILED

For	#Filed	#Allowed	#Extra		Rate	Fee
Total Claims	40	- 20 =	20	x	\$18.00	\$360.00
Indep. Claims	20	- 3 =	17	x	\$80.00	\$1,360.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>						\$0.00
BASIC FEE						\$710.00
OTHER FEE (specify purpose) _____						\$0.00
TOTAL FILING FEE						\$2,430.00

- ☐ A check in the amount of \_\_\_\_\_ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge and credit Deposit Account No. 09-0457(IBM) as described below. A duplicate copy of this sheet is enclosed.
- ☒ Charge the amount of \$2,430.00 as filing fee.
  - ☒ Credit any overpayment.
  - ☒ Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
  - ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated:

June 20, 2001

  
Lawrence R. Fraley  
Reg. No. 26,885  
IBM Corporation  
IP Law Dept. N50/040-4  
1701 North St.  
Endicott, NY 13760  
(607) 755-3207

CC:

**CERTIFICATE OF MAILING BY "EXPRESS MAIL" (37 CFR 1.10)**

Applicant(s): William E. Bernier et al.

Docket No.

END920010026US1

Serial No.

Filing Date

Examiner

Group Art Unit

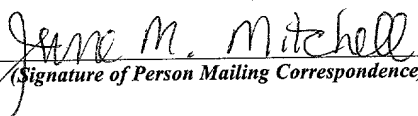
Invention: **EXTENSION OF FATIGUE LIFE FOR C4 SOLDER BALL TO CHIP CONNECTION**

I hereby certify that the following correspondence:

Patent application and corresponding paperwork

*(Identify type of correspondence)*

is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on

6/20/01*(Date)*June M. Mitchell*(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)*ET029404443US*("Express Mail" Mailing Label Number)***Note: Each paper must have its own certificate of mailing.**